WHAT IS CLAIMS IS:

1.   A method of displaying an input signal, the method
      comprising:
            sampling the input signal;
            searching for a zero space pattern in the sampled
      signal;
            locating a first zero space;
            locating a second zero space, following the first
      zero space;
            calculating bit period of the input signal; and
            displaying the input signal using the calculated bit
      period as the basis for a scale.

2.   The method recited in claim 1 further comprising
      initializing offset and time scale.

3.   The method recited in claim 1 further comprising
      determining whether NRZ autoscale is applicable.

4.   The method recited in claim 1 wherein the step of
      locating the first zero space comprises:
            locating a first transition, X_1, where value of the
      input signal is more than a threshold value, V_{THRES}, before
      the first transition, X_1, but less than the threshold
      value, V_{THRES}, after the first transition, X_1, the first
      transition, X_1, being the first such transition following
      the offset; and
            locating a second transition, X_2, where value of the
      input signal is less than the threshold value, V_{THRES},
      before the second transition, X_2, but more than the
      threshold value, V_{THRES}, after the second transition, $X2$,
      the second transition, X_2, being the first such

11

transition following the first transition, X_1.

5.   The method recited in claim 4 wherein the step of
      locating the second zero space comprises:
           locating a third transition, X_3, where value of the
      input signal is more than a threshold value, V_{THRES}, before
      the third transition, X_3, but less than the threshold
      value, V_{THRES}, after the third transition, X_3, the third
      transition, X_3, being the first such transition following
      the second transition, X_2; and
           locating a fourth transition, X_4, where value of the
      input signal is less than the threshold value, V_{THRES},
      before the fourth transition, X_4, but more than the
      threshold value, V_{THRES}, after the fourth transition, X_4,
      the fourth transition, X_4, being the first such
      transition following the third transition, X_3.

6.   The method recited in claim 5 wherein the step of
      calculating the bit period comprises determining temporal
      difference between the third transition, X_3, and the
      first transition, X_1.

7.   The method recited in claim 1 further comprising
      displaying the input signal using a multiple of the
      calculated bit period as the scale.

8.   An apparatus for displaying an input signal, the
      apparatus comprising:
      a processor;
           storage connected to the processor, the storage
      including instructions for the processor to
                sample the input signal;
                search for a zero space pattern in the sampled

12

signal;

    locate a first zero space;

    locate a second zero space, following the first zero space;

    calculate bit period of the input signal; and

    display the input signal using the calculated bit period as the basis for a scale.

9.   The apparatus recited in claim 8 wherein the storage further comprises instructions for the processor to initialize offset and time scale.

10.   The apparatus recited in claim 8 wherein the storage further comprises instructions for the processor to determine whether NRZ autoscale is applicable.

11.   The apparatus recited in claim 8 wherein the storage further comprises instructions for the processor to:

    locate a first transition, X_1, where value of the input signal is more than a threshold value, V_{THRES}, before the first transition, X_1, but less than the threshold value, V_{THRES}, after the first transition, X_1, the first transition, X_1, being the first such transition following the offset; and

    locate a second transition, X_2, where value of the input signal is less than the threshold value, V_{THRES}, before the second transition, X_2, but more than the threshold value, V_{THRES}, after the second transition, $X2$, the second transition, X_2, being the first such transition following the first transition, X_1.

12.   The apparatus recited in claim 11 wherein the storage further comprises instructions for the processor to:

locate a third transition, X_3, where value of the input signal is more than a threshold value, V_{THRES}, before the third transition, X_3, but less than the threshold value, V_{THRES}, after the third transition, X_3, the third transition, X_3, being the first such transition following the second transition, X_2; and

locate a fourth transition, X_4, where value of the input signal is less than the threshold value, V_{THRES}, before the fourth transition, X_4, but more than the threshold value, V_{THRES}, after the fourth transition, X_4, the fourth transition, X_4, being the first such transition following the third transition, X_3.

13. The apparatus recited in claim 5 wherein the storage further comprises instructions for the processor to determine temporal difference between the third transition, X_3, and the first transition, X_1.

14. The apparatus recited in claim 13 wherein the storage further comprises instructions for the processor to display the input signal using a multiple of the calculated bit period as the scale.

15. A machine readable medium comprising program for the machine to display an input signal, the program comprising instructions for the machine to:

sample the input signal;

search for a zero space pattern in the sampled signal;

locate a first zero space;

locate a second zero space, following the first zero space;

calculate bit period of the input signal; and

display the input signal using the calculated bit
period as the basis for a scale.

16. The medium recited in claim 15 wherein the medium is
selected from a group consisting of magnetic disc, optical
disc, read only memory (ROM), random access memory (RAM),
harddrive, compact disc (CD), flash memory, and solid state
memory.